CIVIL RIGHTS IMPACT ANALYSIS SUPPLEMENTAL
FOR THE COLORADO ROADLESS RULE

Agency: U.S. Department of Agriculture
Forest Service
Ecosystem Management Coordination

Subject: Civil Rights Impact Analysis Supplemental Colorado Roadless Rule

Date: September 9, 2015

Introduction

The Colorado Roadless Rule (July 12, 2012) and Final Environmental Impact Statement (FEIS) was reviewed, analyzed, and approved to ensure compliance with Departmental Regulation (DR) 4300-4, Civil Rights Impact Analysis; 7 CFR 15d, Nondiscrimination in Programs and Activities Conducted by the United States Department of Agriculture DR 1512-1 Regulatory Decision-Making requirements and to identify any actual or potential adverse effects based on race, sex, national origin, age, and disabilities.

2015 Rulemaking Background

In July 2012, The U.S. Department of Agriculture promulgated the Colorado Roadless Rule, a state-specific regulation for management of Colorado roadless areas. This Rule addressed State-specific concerns while conserving roadless area characteristics on 4.2 million acres of National Forest System land. One State concern was maintaining ability to construct or reconstruct roads for exploration and development of coal resources on the Grand Mesa, Uncompahgre, and Gunnison (GMUG) National Forests. The Rule addressed this by creating the 19,700-acre North Fork Coal Mining Area, and an exception to the Rule that allows temporary road construction for coal-related activities in the area.

In September 2014, in District Court of Colorado in *High Country Conservation Advocates v. U.S. Forest Service,* Judge Jackson noted:

> " …that the rule appears to be the product of exactly the kind of collaborative, compromise-oriented policymaking that we want in America. Broadly speaking, the CRR balances important conservation interest with the also important economic need to develop natural resources in Colorado. Not everyone got what they wanted out of the rule, but perhaps that is a sign that political process worked as intended."

To answer the narrow question of the rule's compliance with NEPA's disclosure and analysis requirements, the court vacated the exception for coal-related activities within the North Fork Coal Mining Area due to NEPA analysis deficiencies,

1) failure to disclose greenhouse gas (GHG) emissions from production;
2) failure to disclose GHG emissions from combustion; and
3) failure to address the 'Powers' report (an attachment to a public comment letter), critical of the Agency's assumptions about coal substitution.

The Rocky Mountain Region (Region 2) initiated rulemaking (July 3, 2015 Federal Register Notice) to reinstate the North Fork Coal Mining Area exception to the Colorado Roadless Rule and remedy analysis deficiencies identified by the Court. The analysis will also be considering the Social Cost of Carbon protocol for the rulemaking process as identified by the same Court as a deficiency of an associated project-level lease EIS that was also vacated in same decision. A supplemental EIS process will be used for the focused analysis needed to support the rulemaking.

Alternatives

Region 2 will analyze the court identified NEPA deficiencies related to coal production from roadless areas in the North Fork Coal Mining Area through rulemaking and a supplemental EIS. Region 2 proposes three options (NEPA alternatives) to re-evaluate the coal-related exception for the North Fork Mining Area under the 2012 Colorado Roadless Rule (i.e., alternative 2 in the original 2012 RIA).

Alt A- the 2012 Colorado Roadless rule without the coal-related exception (i.e., no-action alternative (court vacatur), or current management). The North Fork Coal Mining Area would be managed as other Colorado roadless areas;

Alt B- the 2012 Colorado Roadless Rule with the coal-related exception for the North Fork Coal Mining Area (19,700 acres) reinstated;

Alt C- the 2012 Colorado Roadless rule with a reduced North Fork Coal Mining Area (12,600 acres) reinstated for the coal-related exception. This alternative addresses public comments and removes acres from the North Fork Coal Mining Area that were identified in the 2005 draft forest plan for the GMUG National Forests as capable for wilderness, and reinstates the coal-related exception.

Colorado Roadless Rule Notice of Intent and Scoping

The Notice of Intent (NOI) for rule making was published in the Federal Register on April 7, 2015. The 45-day scoping period, ended on May 22, 2015. Electronic versions of the NOI were sent to National and Colorado mailing lists. Hard copy versions were sent to 4 separate Tribal governments. Comments were accepted electronically through the 'CARA' public comment system, or hard-copy mail. In total, over 119,411 public comments were received and evaluated. No information regarding the race, sex, national origin, age, or disabilities of those choosing to respond to the NOI was collected.

No public meetings were held during the scoping period. And no groups requested meetings or presentations.

Race, Sex, National Origin, Age, and Disabilities
No specific information concerning respondents' race, sex, national origin, age or disabilities were collected from the scoping comments. There were no comments that indicated there was concern about discrimination by minorities, or women during the scoping process of the Colorado Roadless Rule.

Tribal Consultation
An introductory letter and the NOI applying to the Colorado Roadless Rule and the supplemental EIS were provided to the Ute, Ute Mountain Ute, Northern Ute, and Southern Ute Indian Tribes. No specific requests from tribes were made for additional information or meetings during the scoping period. No letters from the tribes were received concerning the proposed action. Other specific Tribal consultation will be done prior to the supplemental draft being released.

Social and Economic Summary

Social Values and Environmental Justice

The supplemental EIS did not include any update to the social or environmental justice analysis completed for the 2012 EIS. The analysis for alternatives within the 2012 FEIS accounts for the potential supplemental changes. If the vacatur remains in effect (alternative A), the social impacts are similar to those of 2012 alternative 1 (2001 Rule). And if the proposed alternative is selected and the exception for mining activities within the North Fork Coal Mining Area would be allowed, the social impacts would be similar to 2012 alternative 2 (Colorado Roadless Rule).

No additional populations are included in the analysis, so there are no changes in potential disproportionate and adverse impacts to low income or minority populations.

Economic Analysis

Scope of Analysis
The focus of this economic analysis is on the deficiencies outlined by the District Court of Colorado in *High Country Citizens Alliance*, 52 F. Supp. 3d. at 1196, changes in economic trends and information related to those deficiencies, and substantive scoping comments.

The scope of this analysis is specific to the North Fork Coal Mining Area as defined in the Colorado Roadless Rule. The economic evaluations in this supplemental EIS

addresses economic impacts (employment, transfer payments) to local areas and net benefits (or efficiency analysis) as separate analyses. Employment is not considered a measure of benefits (in this supplement, nor the 2012 FEIS), but instead is offered as a descriptor of distributional impacts of the decision on local or regional economies and populations, consistent with Office of Management and Budget (OMB) circular A-4, as well as Forest Service Manual (FSM 1970) and Forest Service Handbook (FSH 1909.17). It is further noted that discussions of benefit and cost analysis (BCA) is provided to respond to questions associated with deficiencies associated with the original rule-making as noted above; BCA discussions extend the scope and methodology of this economic study well beyond the traditional scope of BCA performed for public land use decisions. Presentation of BCA for this action is not intended to confirm or establish precedence for the general application of these approaches to mineral leasing or other project-level decisions.

The timeframe of the economic impact analysis is a 15-year period, consistent with Forest Service planning efforts, and the timeframe used in the 2012 FEIS. The timeframe extends to 2051 for discussions of benefits and costs. The potential mining of recoverable coal from the North Fork Coal Mining Area is the focus of this economic analysis of the supplement.

The other resources discussed in the economic analysis of the 2012 FEIS do not require supplement analysis.

Coal Production Estimates

Production of recoverable coal has been estimated, using a low, average, and permitted scenarios of coal output based on production data from past mine activity, existing permits, and estimates of recoverable coal reserves. While future mine activity is not known, the three scenarios have been projected to serve as reasonable estimates.

Annual outputs within each of the three scenarios are kept consistent over time until reserves are exhausted, so the ending year varies across the three scenarios. The 2012 FEIS assumed three coal mines would be operating in the North Fork Coal Mining Area, for this supplemental analysis, past and current data is being used from the mines, but no assumption is made of the number of mines that may be operating or could bid on future leases.

Aggregate annual coal production rates are assumed to be constrained by any individual mine operation and permitted capacity, implying that the period of time to extract all coal will vary as a function of the amount of reserves made available under each alternative. Table 1 shows the projected schedules of gross North Fork Coal Mining Area coal mine production under the low, average, and permitted scenario production rates, necessary to exhaust accessible reserve amounts under each alternative.

Table 1. Estimated Schedule of Gross North Fork Coal Mining Area Extraction (millions of tons)

Production Rate	Beginning Year (Production)	Ending Year (Production)	Total Years	Total Production
Alternative A				
Low Scenario	2016 (5.2)	2018 (0.8)	3	11.2
Average Scenario	2016 (10)	2017 (1)	2	11.2
Permitted Scenario	2016 (11.2)	--	1	11.2
Alternative B				
Low Scenario	2016 (5.2)	2051 (2)	36	183.5
Average Scenario	2016 (10)	2034 (4)	19	183.5
Permitted Scenario	2016 (11.2)	2027 (13)	12	183.5
Alternative C				
Low Scenario	2016 (5.2)	2036 (2)	21	105.8
Average Scenario	2016 (10)	2026 (6)	11	105.8
Permitted Scenario	2016 (11.2)	2022 (13)	7	105.8

Economic Impact

Output, employment, and labor income impacts in the 5-county area from estimated coal production within the North Fork Coal Mining Area are shown in Tables 2-4. All indicators are expressed on an average annual basis over a 15-year analysis period (2016-2030). Only those impacts associated with potential development and production from the North Fork Coal Mining Area are included. The 3 tables highlight a range of production that may occur within the North Fork Coal Mining Area, Table 2 is based on a low rate of production over time of 5.2 million tons/year, Table 3 shows the estimates for an average rate of production of 10 million tons/year and Table 4 is a maximum production estimate based on the state air quality permits that would allow the two current mines a total of 15 million tons/year.

Alternative C displays the same annual average impacts as alternative B, but the timeframes under all three scenarios is shorter due to the smaller size of the North Fork Coal Mining Area under alternative B (table 1). Employment for the action alternatives may range between about 1,000 total jobs (direct, indirect, and induced) to 2,300 total jobs, depending on the production level (low, average, permitted). The impact would likely last over more years under alternative B than alternative C due to the overall amount of coal available over time with a larger coal mining area. Similar output

estimates are displayed for the value of production and labor income.

Table 2. Average Annual Economic Impacts Estimated by Alternative for North Fork Coal Mining Area Coal 2016-2030 (2013 dollars), Coal Production – Low Scenario

Activity/ Effects	Value of Production ($ millions)			Employment (jobs)			Labor Income ($ millions)		
	Alt A	Alt B	Alt C	Alt A	Alt B	Alt C	Alt A	Alt B	Alt C
Direct	27	190	190	68	475	475	8	55	55
Indirect	5	32	32	24	165	165	1	10	10
Induced	5	32	32	50	346	346	2	12	12
Totals	37	254	254	142	986	986	11	78	78

Table 3. Average Annual Economic Impacts Estimated by Alternative for North Fork Coal Mining Area Coal 2016-2030 (2013 dollars), Coal Production – Average Scenario

Activity/ Effects	Value of Production ($ millions)			Employment (jobs)			Labor Income ($ millions)		
	Alt A	Alt B	Alt C	Alt A	Alt B	Alt C	Alt A	Alt B	Alt C
Direct	27	366	366	68	913	913	8	107	107
Indirect	5	61	61	24	318	318	1	20	20
Induced	5	62	62	50	665	665	2	24	24
Totals	37	489	489	142	1,897	1,897	11	150	150

Table 4. Average Annual Economic Impacts Estimated by Alternative for North Fork Coal Mining Area Coal 2016-2030 (2013 dollars), Coal Production – Permitted Scenario

Activity/ Effects	Value of Production ($ millions)			Employment (jobs)			Labor Income ($ millions)		
	Alt A	Alt B	Alt C	Alt A	Alt B	Alt C	Alt A	Alt B	Alt C
Direct	27	448	448	68	1,117	1,117	8	130	130
Indirect	5	74	74	24	389	389	1	24	24
Induced	5	76	76	50	814	814	2	29	29
Totals	37	598	598	142	2,320	2,320	11	183	183

Summary of Economic Impacts

Continued opportunities for coal leasing in the North Fork Coal Mining Area under Alternative's B and C could result in a stable workforce for an additional 15 to 30 years, depending on production. Alternative A eliminates future opportunities for leasing coal in the North Fork Coal Mining Area; any future activity would be associated with currently existing leases.

Benefits, Social Costs, Substitution, and Present Net Value Results

Net Energy Production, Consumption, Exports, and CO2 Emissions

Cumulative net energy production and consumption, as well as CO2 emissions associated with production and consumption is summarized in Table 5, demonstrating substitution that occurs across supply and demand regions in response to increased production of North Fork Coal Mining Area coal.

Table 5. Changes in the Mixture of Energy Production, Electricity Generation, and Carbon Dioxide Emissions for Alternatives B and C, Compared to Alternative A (totals for 2016 – 2054)

	Alternatives	
	B-A	**C-A**
Change in Gross North Fork Coal Production (1)		
Total Coal Production – millions tons	172	95
Change in Net Domestic Energy Production (2)		
National Underground Coal – millions tons	91	50
National Surface Coal (millions tons)	-23	-13
Total National Coal (millions tons)	68	37
National Natural Gas (BCF)	-271	-149
Change in Net Domestic Electricity Generation by Fuel Type (3)		
Electricity from Coal (GWh)	112,168	61,585
Electricity from Natural Gas (GWh)	-71,677	-39,354
Electricity from Renewable Energy (GWh)	≈-40,000	≈-22,000
Total Electricity Generation (GWh)	≈0	≈0
Change in Coal Exports (shipped and consumed) (4)		
Coal Exports (millions tons)	17	9
Change in Net CO_2 Emissions (Million tons)		
From Production of Coal and Natural Gas	1.1	0.6
From Domestic Consumption of Coal	*118*	*65*
From Domestic Consumption of Gas	*-43*	*-24*
From Domestic Consumption of Coal and Gas	75	41
From Transportation of Coal	10	5
From Exported Coal Transport plus Combustion	45	25
Total CO_2 Emissions	131	72

(1) Based on schedules of North Fork Production, by Alternative (see Table 1)

(2) Net energy production reflects decreases in production of substitute sources of fuel, including sources of underground coal from other supply regions, in response to increases in North Fork underground coal production.

(3) Changes in aggregate electricity generation across energy sources are assumed to be zero, reflecting IPM modeling assumptions of fixed demand across alternatives.

(4) Changes in net carbon dioxide emissions in this table are used to estimate social costs of carbon dioxide emissions for the domestic and global accounting stances in Table 3-21 (see the section "Overview of Benefit Cost Framework" for calculation steps).

Table 5 displays the assumption that total gross production of underground coal from the North Fork Coal Mining Area increases by 172 million tons over the period 2016 to 2054 for Alternative B, compared to Alternative A. Production from other substitute sources of underground coal around the nation are likely to decrease, in many cases, in response to this increases in North Fork Coal Mining Area underground coal production. These decreases offset, in part, some of the 172 million tons of underground coal production from the North Fork Coal Mining Area, resulting in net domestic underground coal production of 91 million tons.

In a similar fashion, production of substitute sources of surface coal and natural gas across the country are estimated to decrease by 23 million tons and 271 BCF, in response to increases in North Fork Coal Mining Area coal production. Total electricity generation is assumed to remain constant across alternatives, so change in total electricity generation is equal to zero for Alternative B, compared to A. However, the mix of energy sources used to generate the electricity changes, in response to increases in North Fork Coal Mining Area coal production. Electricity generated from coal (underground and surface mined) is estimated to increase by approximately 112,000 GWh, while electricity generation from natural gas decreases by approximately 72,000 GWh. Decreases in electricity generation from renewable energy sources makes up the remaining balance of approximately 40,000 GWh.

These shifts in the mixtures of energy used to generate electricity, as well as the production of different types of energy will change carbon dioxide emissions. Table 5 indicates that total carbon dioxide emissions increase by 131 million tons under Alternative B, compared to A. Changes in carbon dioxide emissions are estimated by multiplying changes in net energy production, net electricity generation, and coal exports by respective carbon dioxide emission factors.

Discounted Benefits, Social Costs, and Present Net Values

The ranges of benefits and social costs of alternatives evaluated in this supplemental analysis are shown in Table 6 below. Due to the use of electric power generation cost savings as a proxy for benefits, results are provided only for Alternatives B and C, relative to Alternative A (i.e., cost savings cannot be characterized for stand-alone alternatives). Ranges are shown to account for the variation across production schedules (low, average, permitted), SCC value assumptions (five levels), and three accounting stances.

Table 6. Summary of Discounted Benefits and Social Costs Results (million 2014$)

	Alternative B – Alternative A		Alternative C – Alternative A	
	Discounted Benefits	Discounted Costs	Discounted Benefits	Discounted Costs
Forest Boundary				

Lower Estimate (a)	$340	-$7	$277	-$4
3% Discount Avg (Lower) (b)	$453	-$30	$347	-$18
3% Discount Avg (Upper) (b)	$782	-$10	$456	-$6
Upper Estimate (a)	$807	-$16	$465	-$9
National Boundary				
Lower Estimate (a)	$1,140	-$3,163	$734	-$1,760
3% Discount Avg (Lower) (b)	$1,284	-$1,069	$792	-$601
3% Discount Avg (Upper) (b)	$2,410	-$282	$1,609	-$169
Upper Estimate (a)	$2,614	-$443	$1,698	-$169
Global Boundary				
Lower Estimate (a)	$1,140	-$13,751	$734	-$7,652
3% Discount Avg (Lower) (b)	$1,284	-$4,646	$792	-$2,611
3% Discount Avg (Upper) (b)	$2,410	-$4,034	$1,609	-$2,420
Upper Estimate (a)	$2,614	-$489	$1,698	-$293

**The sum of discounted benefits and discounted social costs may not be exactly equal to PNV results in Table 3-22 due to rounding.*
(a)Lower and upper estimates are drawn from results from all production schedules (low, average, permitted), and using all the SCC values except the following: 10th percentile SCC values in Forest or National Boundary stances; 5% average SCC values in the Forest Boundary stances, as SCC values in these cases were lower than typical carbon credit prices.
*(b)*Ranges for average SCC values for 3% discount rates are singled out as representative of mid points.

Benefit results under the national and global boundary stances are identical, as benefit calculations are based on the same assumptions for these stances (i.e., domestic electricity generation cost savings plus net value of coal exports). Benefit are lower for Forest boundary assumptions, but social costs are substantially lower for the Forest Boundary compared to national and global stances. These results demonstrate that a majority of CO2 emissions and social costs are due to downstream consumption of coal, as well as overseas transport and consumption of coal. Production of coal (i.e., mining) accounts for relatively lower amounts of CO2 social costs.

Discounted benefits and costs are added to estimate present net values in Table 7 below. Under the traditional Forest boundary stance, PNV results are positive. PNV results under the national boundary stance, where social costs are accounting for damages to the U.S. public only, range from positive to negative. Midpoint PNV estimates, as represented by average SCC values (assuming a 3% discount rate) are positive or neutral, ranging from $215 million to $2.2 billion for Alternative B, relative to Alternative A.

PNV results estimated under the global stance are primarily negative, with values as high as $12 billion in net damages. Midpoint PNV estimates range from $1.6 to $3.4 billion in net damages. Comparison of the results between the national and global stances demonstrates the significance of considering the damages of domestic GHG emissions on the global community and underlines the need to address GHG emissions within an international context. Decisions based solely on PNV results would indicate

that, if concerns are limited to potential GHG damages to the U.S. population, the proposed action is acceptable (or neutral). If decisions account for the potential impacts of the proposed action on populations outside the U.S., then PNV results suggest that no-action might be the preferred alternative.

Table 7. Present Net Values (million 2014$)

	Alternative B – Alternative A	Alternative C – Alternative A
	- - - - - - - - - - millions of 2014 dollars - - - - - - - - - -	
Forest Boundary		
Lower Estimate (a)	$334	$272
3% Discount Avg (Lower) (b)	$423	$329
3% Discount Avg (Upper) (b)	$772	$450
Upper Estimate (a)	$791	$456
National Boundary		
Lower Estimate (a)	-$1,879	-$968
3% Discount Avg (Lower) (b)	$215	$191
3% Discount Avg (Upper) (b)	$2,127	$1,440
Upper Estimate (a)	$2,171	$1,440
Global Boundary		
Lower Estimate (a)	-$12,468	-$6,861
3% Discount Avg (Lower) (b)	-$3,363	-$1,819
3% Discount Avg (Upper) (b)	-$1,624	-$811
Upper Estimate (a)	$1,920	$1,317

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*(b)*Ranges for average SCC values for 3% discount rates are singled out as representative of mid points.

Mitigation Measures

Additional outreach to Ute, Ute Mountain Ute, Northern Ute, and Southern Ute Indian Tribes will be accomplished prior to the supplemental draft being released. Outreach with underserved populations or underrepresented populations will be completed if such populations are identified.

Monitoring and Evaluation

No additional monitoring and evaluation would be added due to this supplemental analysis, project-level NEPA will continue with adequate public involvement that will consider access and concerns from minorities, women, persons with disabilities, and low income populations.

Net Civil Rights Impacts

The CRIA supplement revealed no adverse effects associated with the Colorado Roadless rulemaking process to the participation of any persons or groups based on race, sex, national origin, age, and disabilities. The process was open to the participation

of any individuals or groups. There were no known barriers at the public process;

- all were open to the public,
- all were advertised locally through Forest networks, and
- all meeting facilities were accessible to the public including persons with disabilities.

Under all alternatives, there would be no difference in opportunities for women, minorities, or persons with disabilities.

Civil Rights Impact Analysis for Colorado Roadless Rulemaking – Supplemental

Prepared by: Julie Schaefers Date: September 9, 2015

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Reviewed by: Jerome Romero Date: September 9, 2015

JEROME ROMERO
Region 2, Deputy Director, Civil Rights

CIVIL RIGHTS IMPACT ANALYSIS CERTIFICATION

This is to certify that the undersigned:

Major Responsibilities

- Worked with subject matter experts, including agency civil rights officials, during the planning and development of the **USDA Forest Service, Colorado Roadless Rule Supplemental.**
- Identified and analyzed the civil rights implications and impacts of eligibility criteria, methods of administration, and other requirements associated with this proposal.
- Instituted civil rights strategies to eliminate, alleviate, or mitigate adverse and disproportionate civil rights impacts identified in the CRIA.

Monitoring and Evaluation

- The undersigned agrees to monitor implementation on all civil rights strategies that were instituted in connection with this proposal, evaluate their effectiveness, and take follow-up action where adverse civil rights impacts persist.

Signatory

Florence R. Navarro **Date:** 9/25/2015

FLORENCE R. NAVARRO
Director, Civil Rights
Rocky Mountain Region/Intermountain Region

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Signatory

for _____ **Date:** Oct. 20, 2015

THEODORE H. GUTMAN
Director of Civil Rights
USDA Forest Service